

# X Series

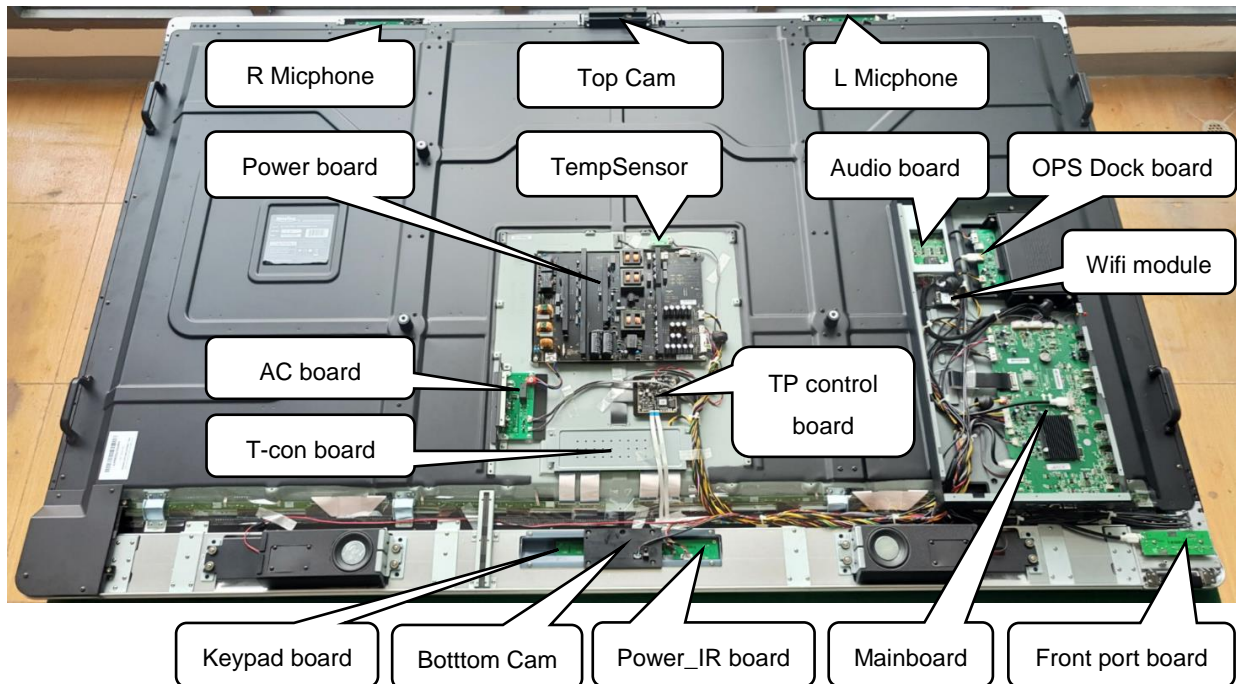
## Service Manual



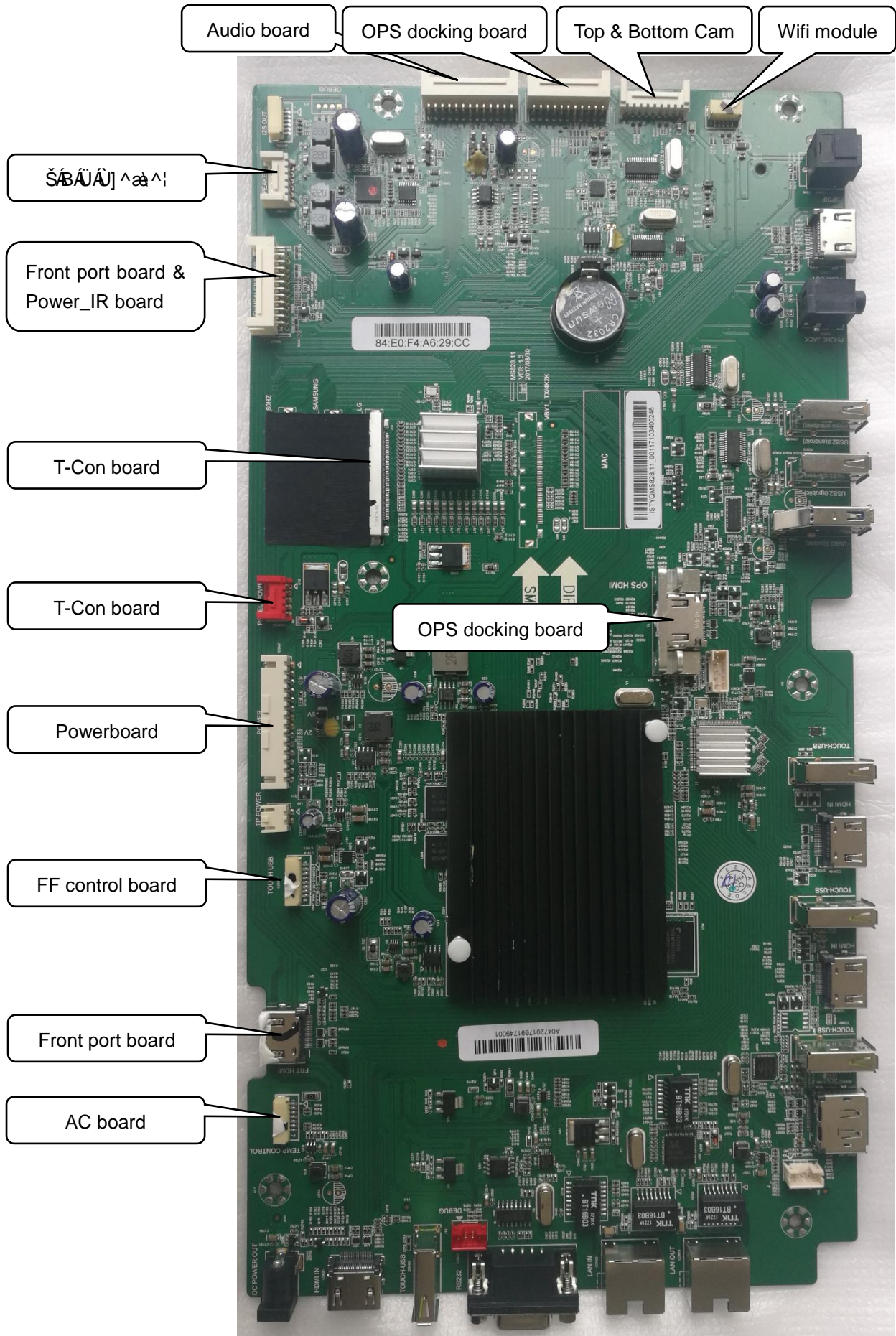
## Safety Notice

1. There are many electrical and mechanical parts in the **TRUTOUCH** VN Series interactive display. Pay attention and take safety precautions before repairing the display.
2. It is essential that all components be replaced with authorized components recommended in this manual to prevent shock, fire, or any other hazards.
3. Please do not modify the original mechanical or electrical design without previous verification from the manufacturer or authorized agent.
4. Before starting a repair or disassembling the display, please make sure to unplug the display from any power source.

## Part A. PCBA Overviews



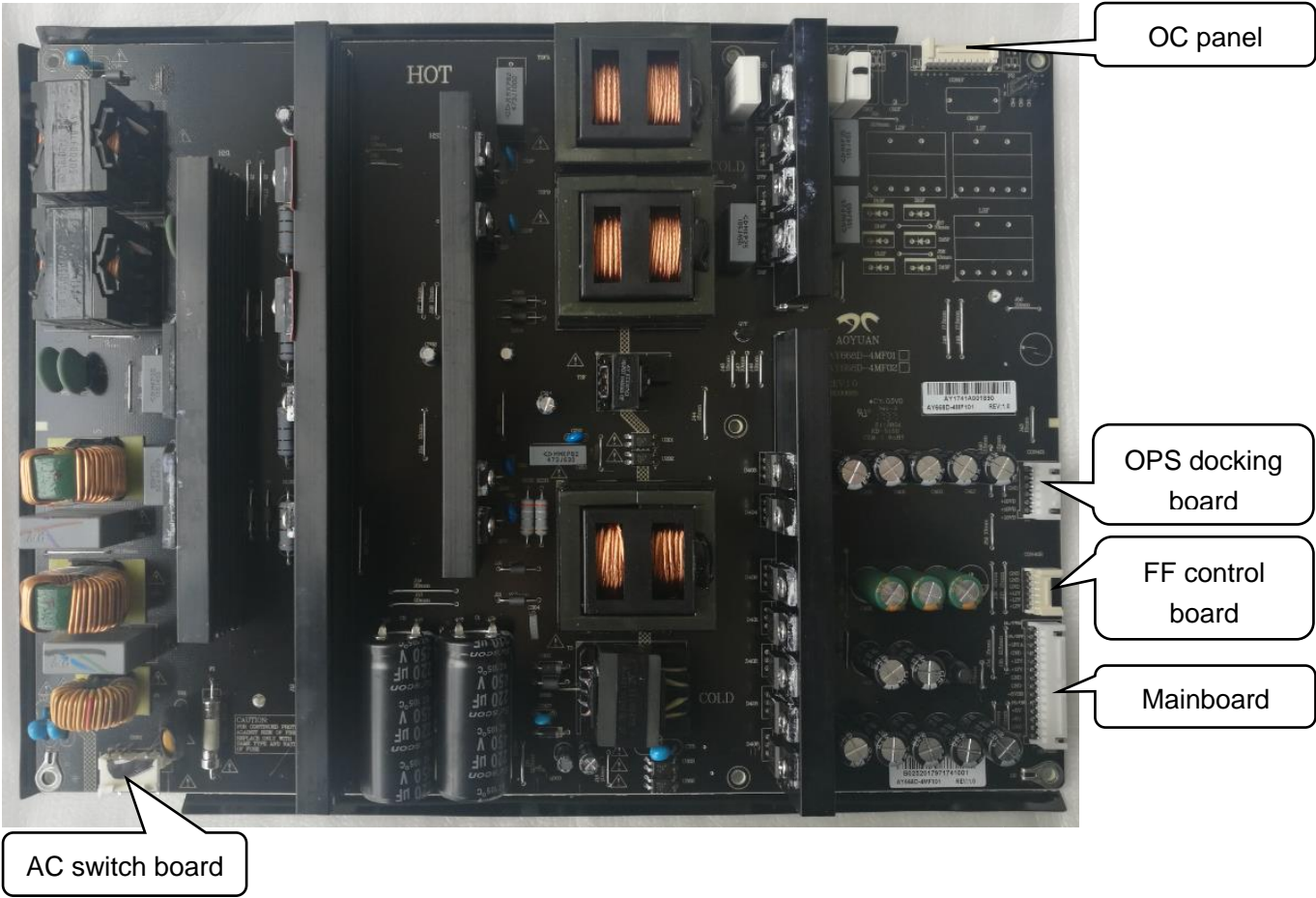
1. Mainboard wiring



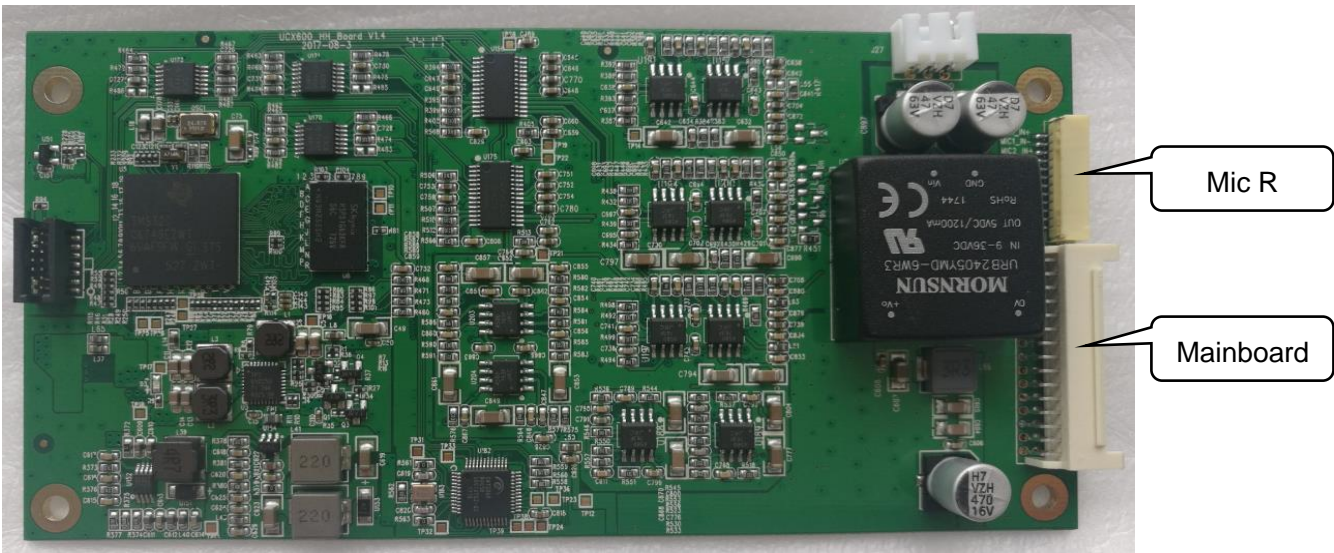




2. Powerboard wiring

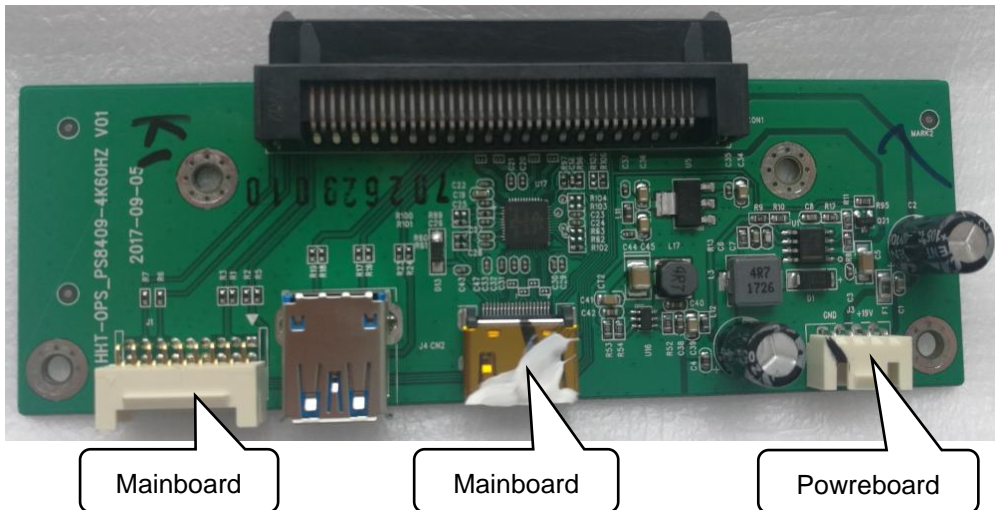


3. Audio board wiring

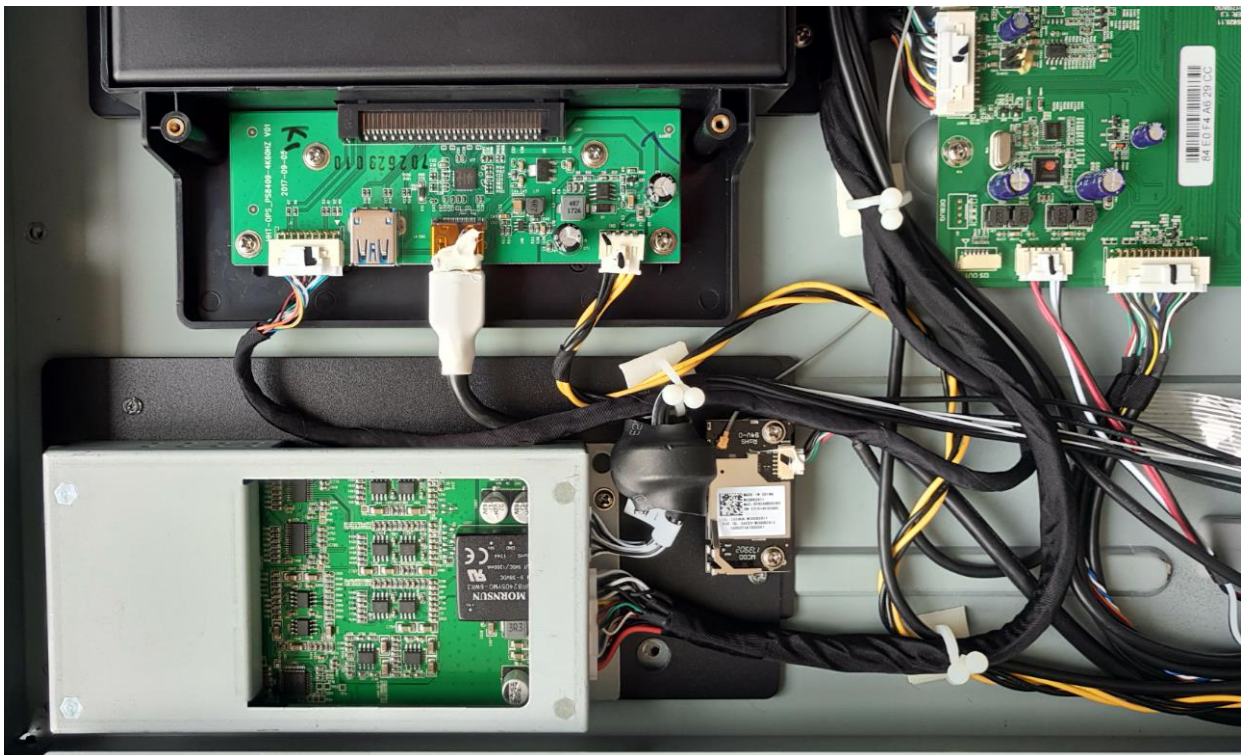




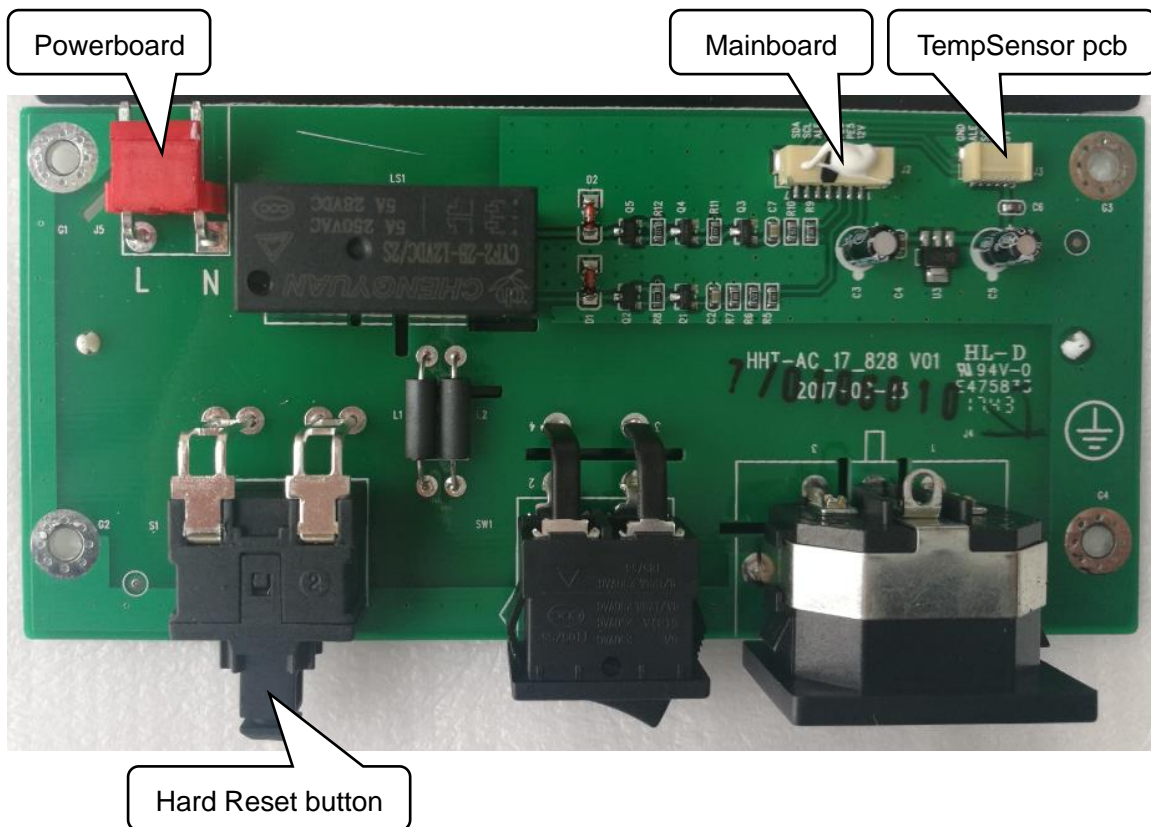
4. OPS docking board wiring



5. Wifi module wiring



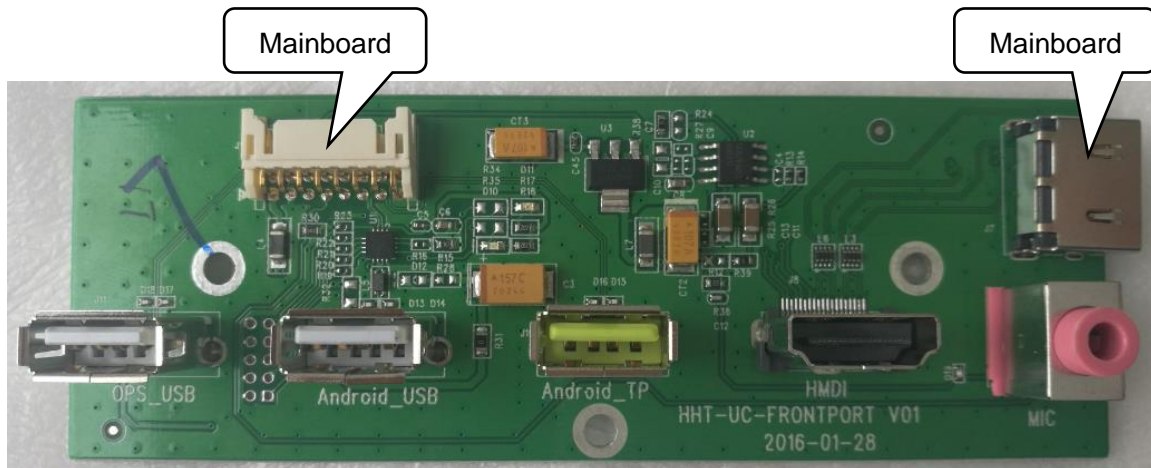
## 6. AC Switch board wiring



Tips:

1. After March 2018, there is no longer a Hard Reset button in the AC switch board.

## 7. Front port board wiring

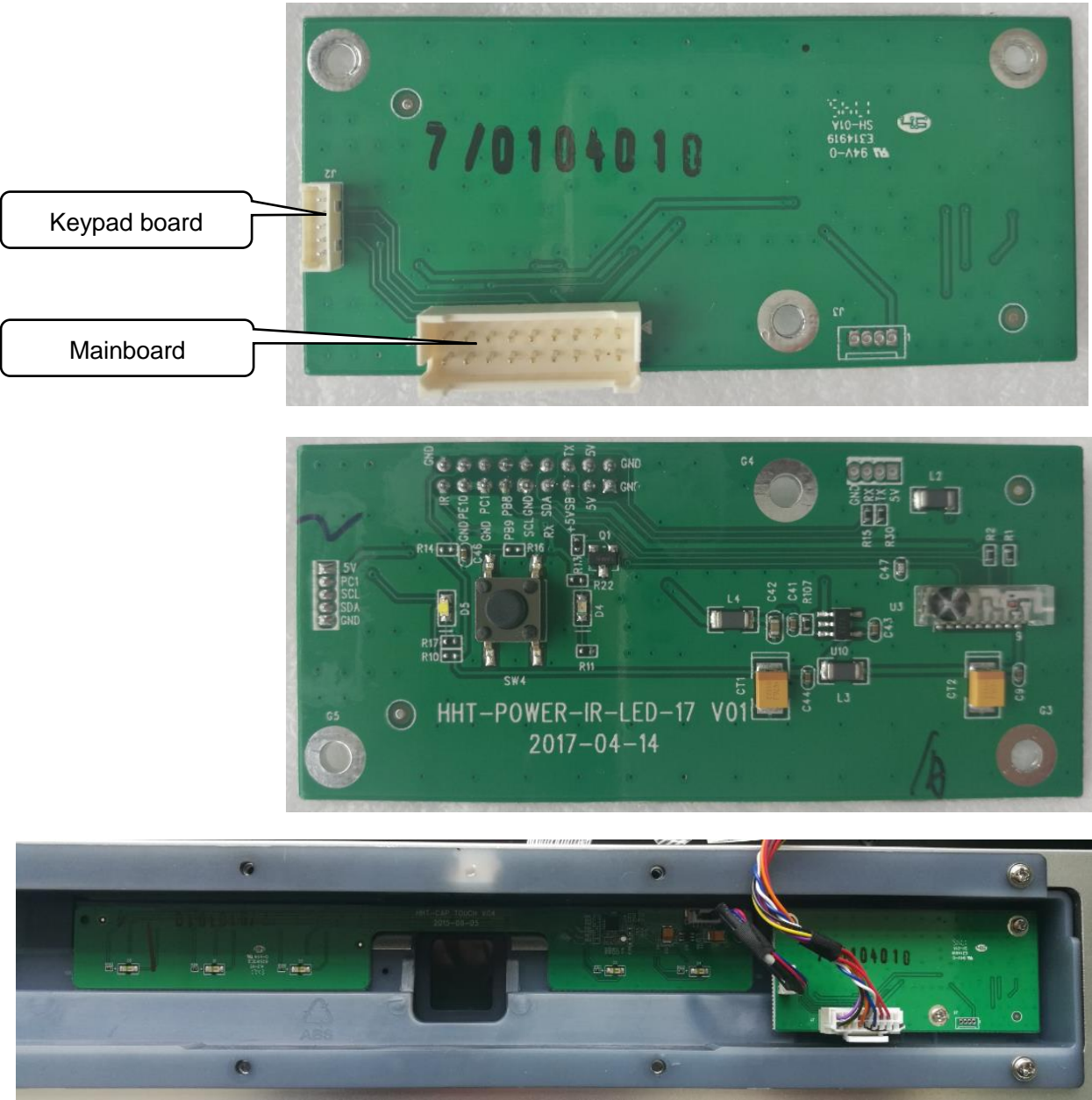


## 8. Keypad PCBA connections

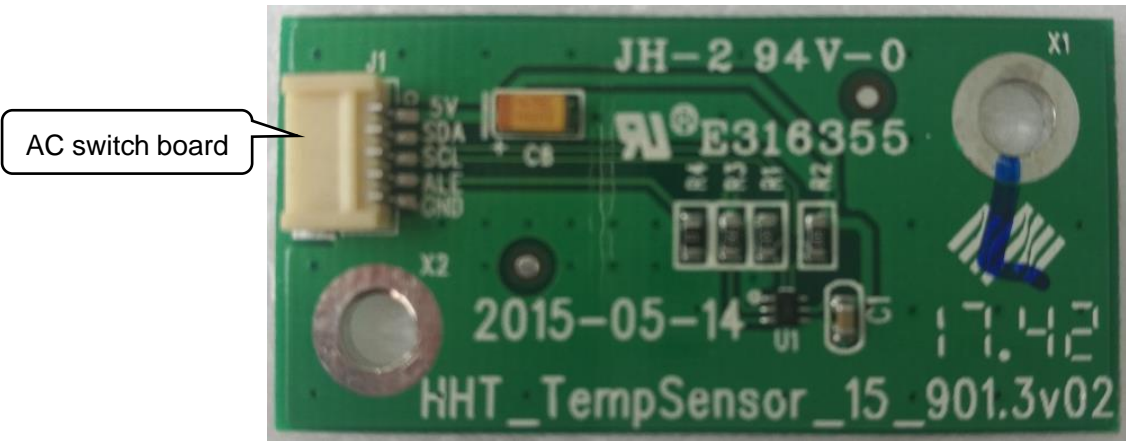




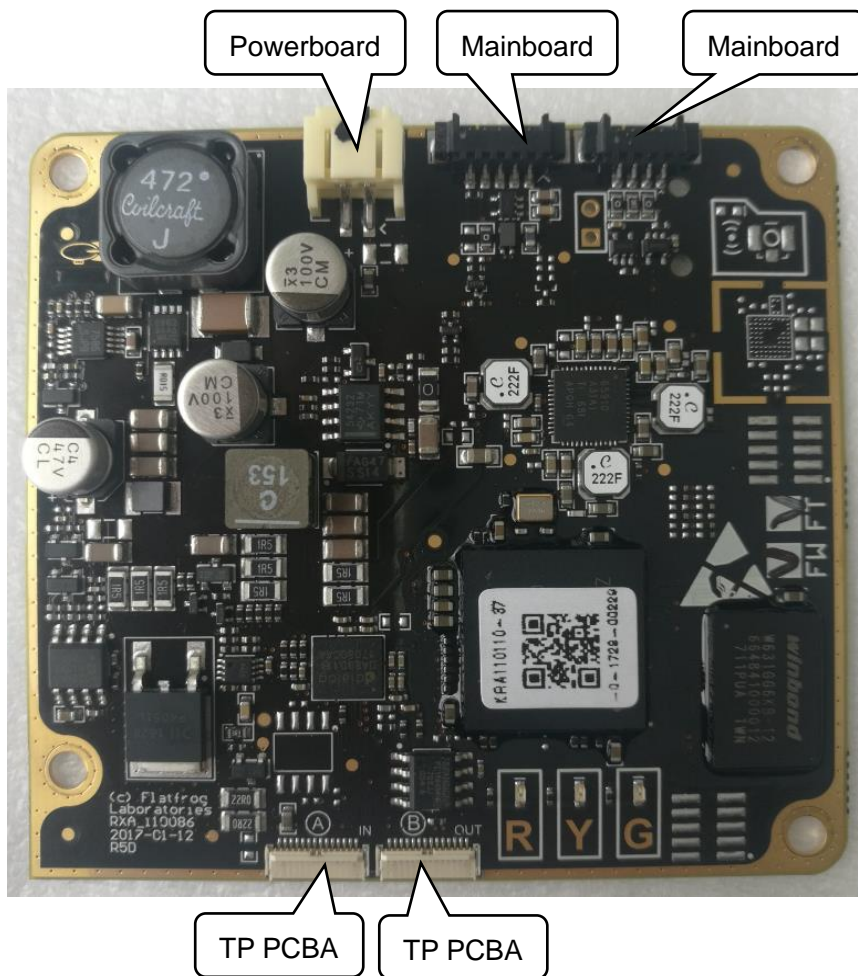
9. Power\_IR board wiring



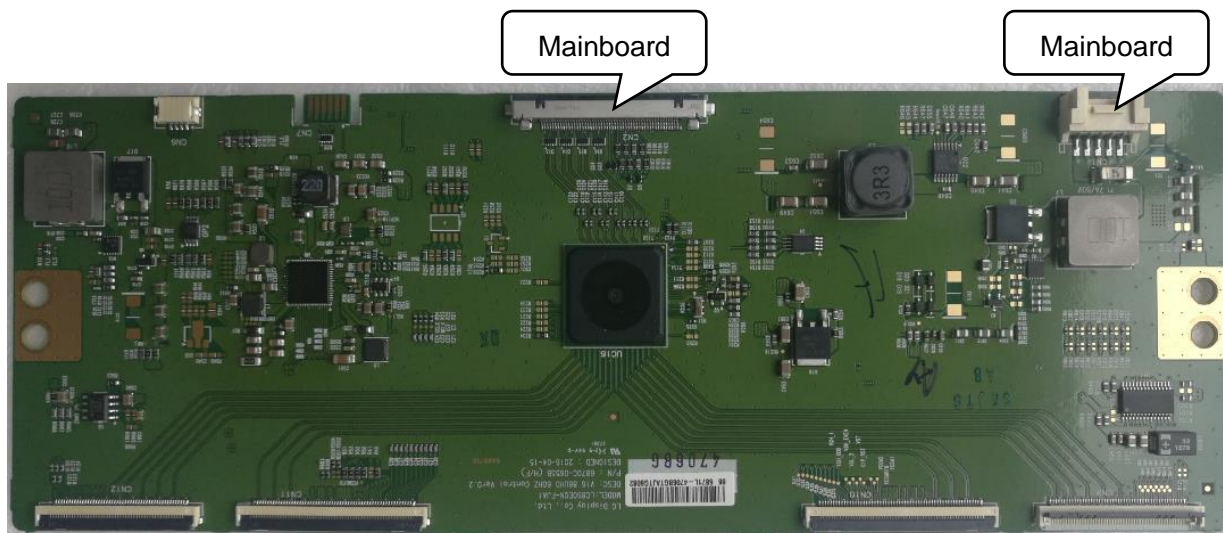
10. TempSensor PCBA wiring



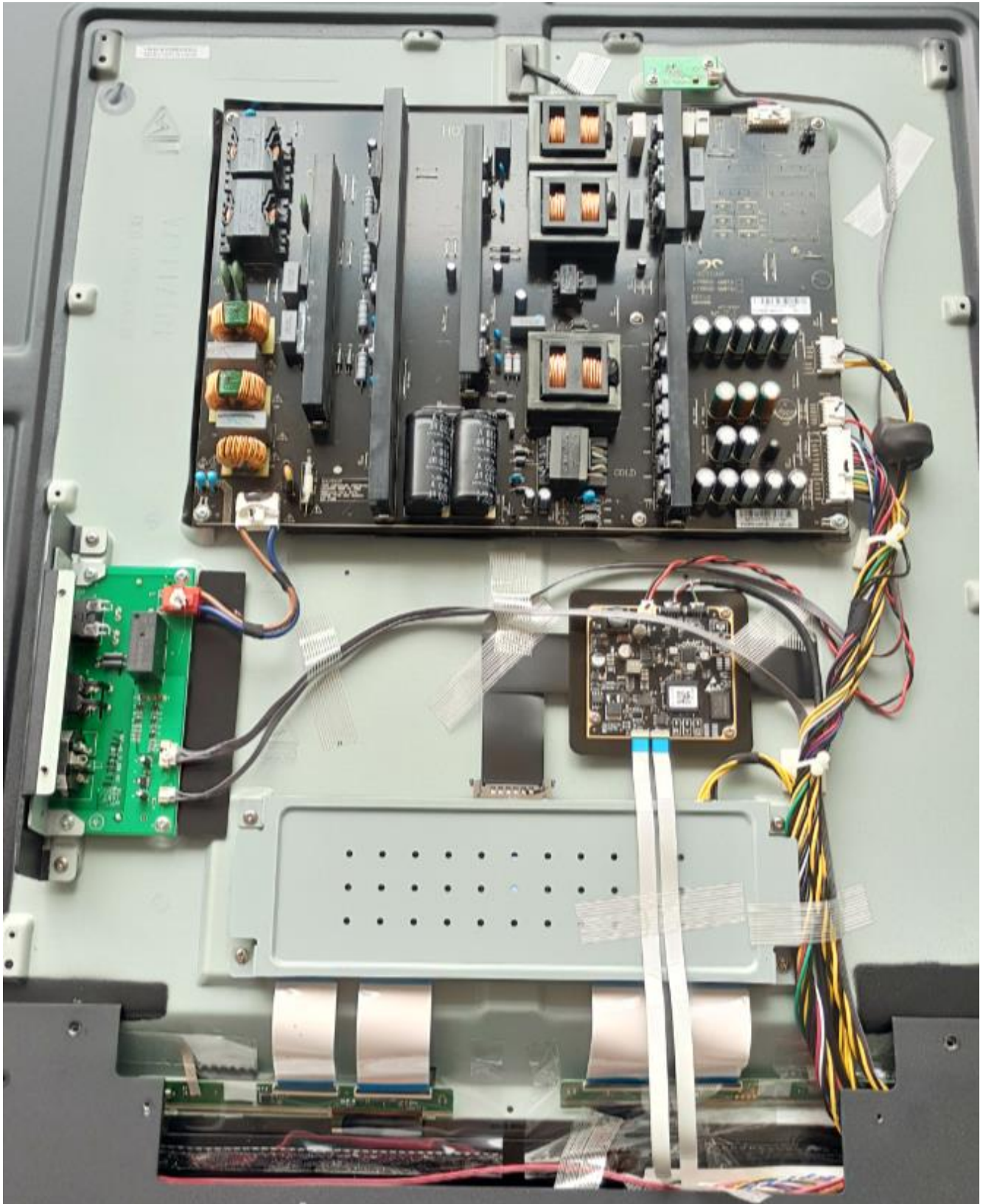
11. FlatFrog Touch Panel Control board wiring



12. T-CON board wiring



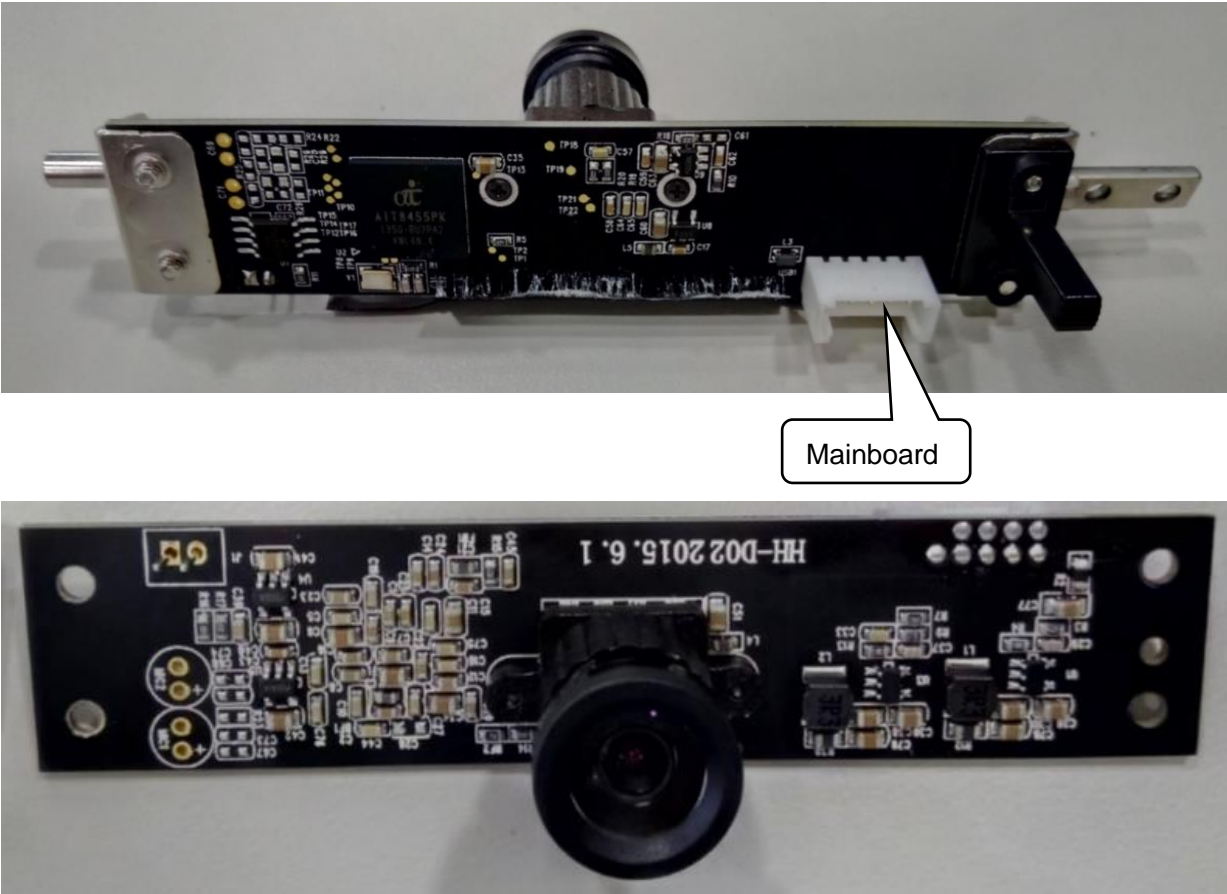




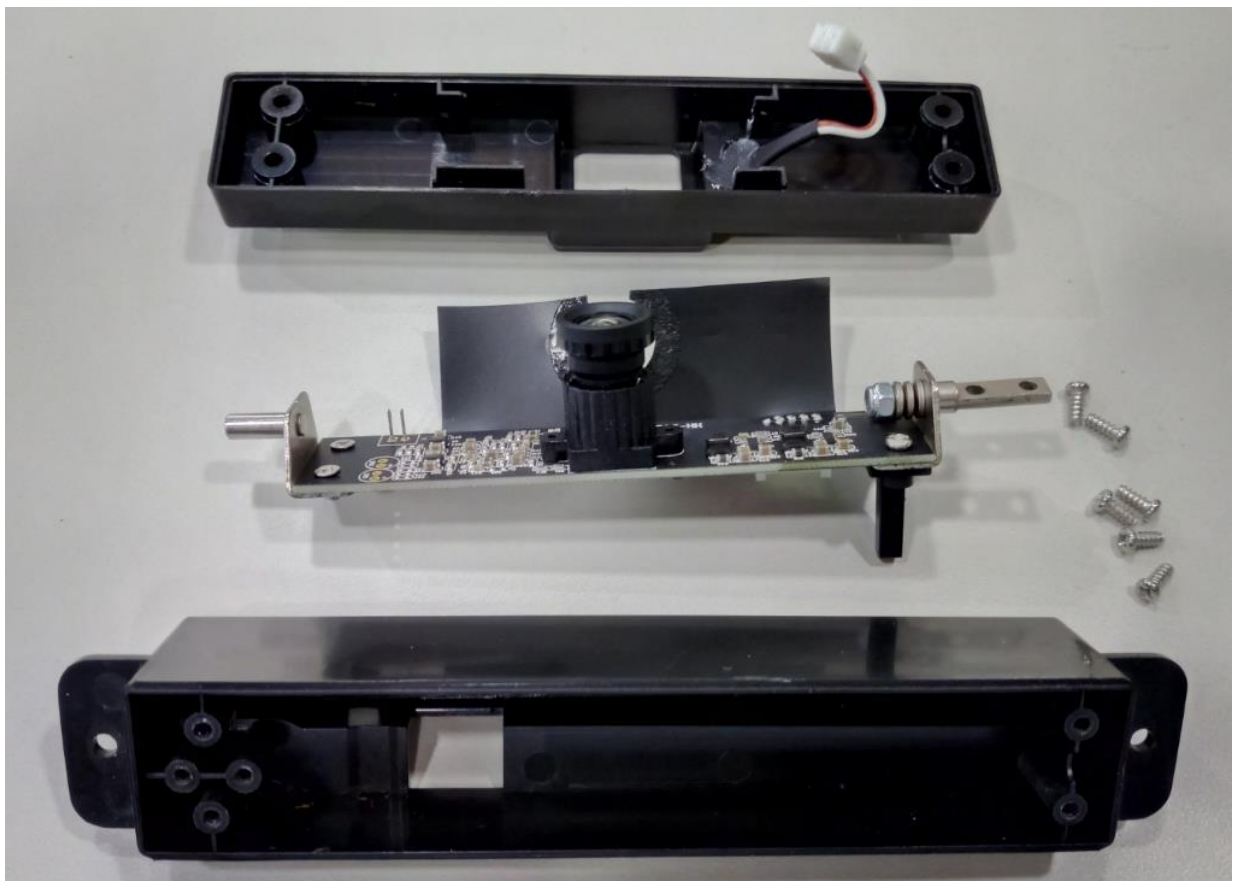
13. Micphone pcba L & R wiring



14. Camera module wiring

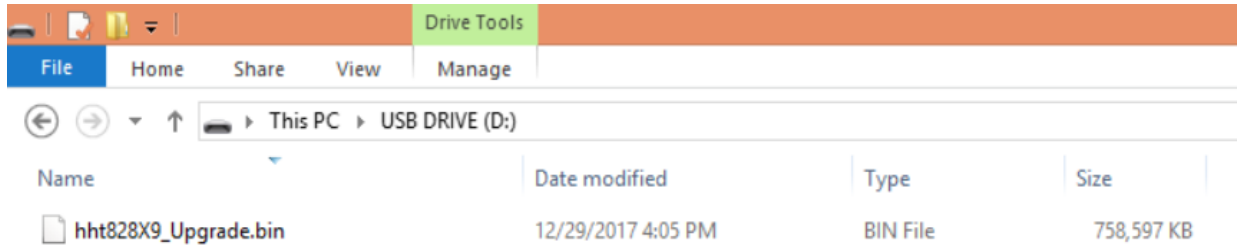






## Part B. Firmware Upgrade

Step 1: Prepare a USB drive and format it with the FAT32 format. Copy the firmware files to the root folder of the USB drive, as shown in the following images:



Step 2: Turn off the display and connect the USB drive to the below front USB port.



Step 3: Turn on the display and the firmware upgrade will start automatically.



Step 4: When the firmware upgrade is finished, the display will restart automatically.

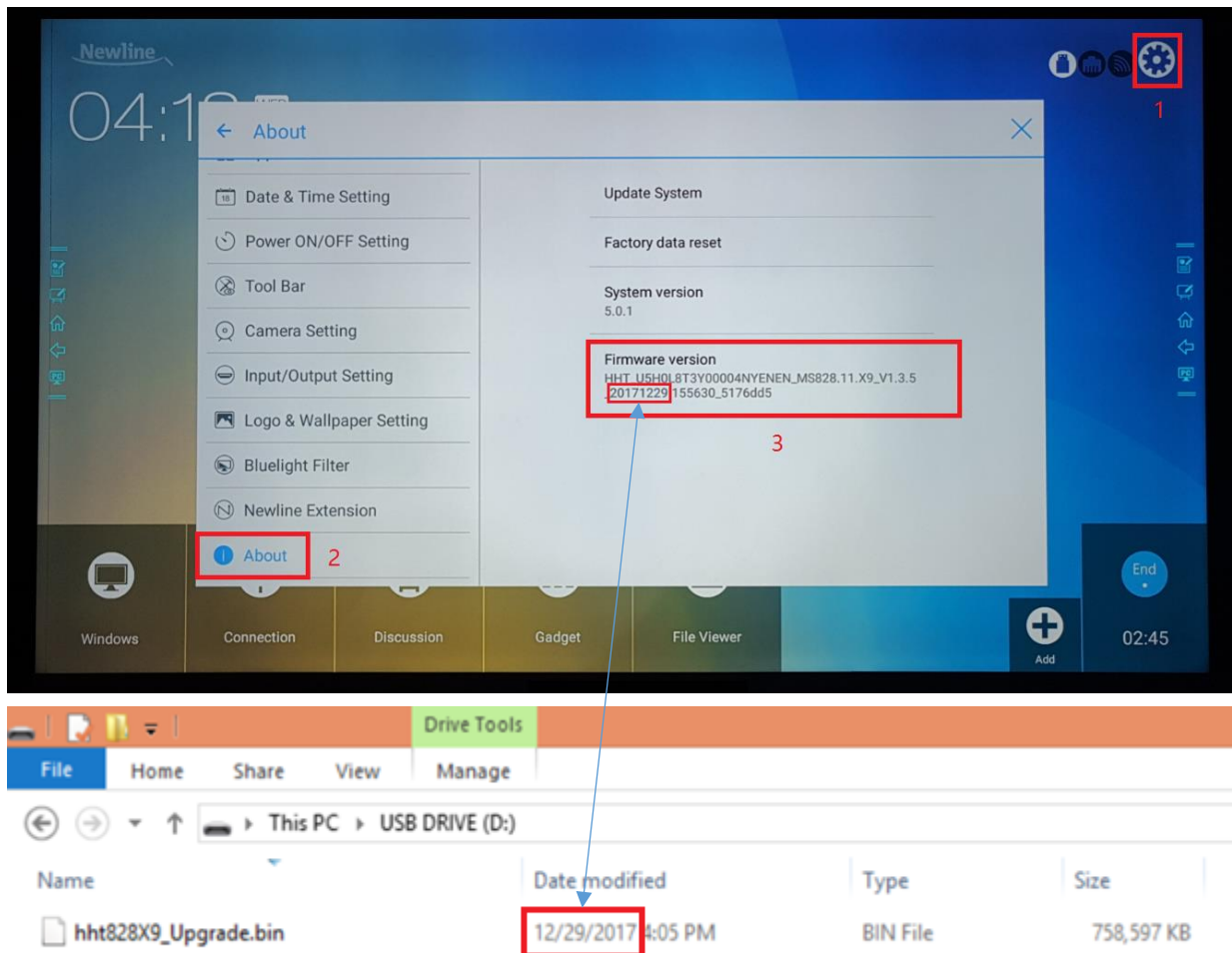


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Step 5: On the first boot-up after the firmware upgrade, it will stay on the X Series splash logo for about 3 minutes.



Step 6: Go to settings menu to check the firmware version is correct.



## Part C. Trouble shooting

Problem #1: Can't turn on machine (Power indicator always stay on red)

Problem #2: Dim screen (After turn on, the display gets an image but it is very faint and hard to see)

Problem #3: Android can't pick up the OPS signal

Problem #4: No power (Power indicator is blank, neither green or red)

Problem #5: Partial touch or dead touch area

Problem #6: No touch

Problem #7: Ghost touch or the calibration is inaccurate

Problem #8: No image (Black screen) even no faint display

Problem #9: Noise in the image or color distortion

Problem #10: Flickering screen

Problem #11: Stuck on splash logo, can't enter Home Screen

Problem #12: Broken sound or sound popping

Problem #13: No audio output from OPS

Problem #14: No signal from all HDMI inputs

Problem #15: Wifi module not working, can't detect wifi signal

Problem #16: Front HDMI not working



**Problem #1: Can't turn on machine (Power indicator always stay on red)**

Step 1: Replace the mainboard first.

Step 2: Replace the powerboard.

**Problem #2: Dim screen (After turn on, the display get image but is very faint hard to see)**

Step 1: If backlight is ON, replace the optical bonding module.

Step 2: If backlight is OFF, replace the backlight module.

**Problem #3: Android can't pick up the OPS signal**

Step 1: Check if the OPS is powered on. If not, press POWER button on the OPS front panel to check if the OPS can be powered on or not.

Step 2: Check if the OPS can work with another known-working touchscreen. If it does not, replace the OPS.

Step 3: If there are no other touchscreens, connect the OPS via external HDMI cable to display's rear HDMI IN port. If it works, check the OPS installed the graphic card drivers properly or not. If it does not work, install the graphic card drivers.

Step 4: Replace the mainboard.

Step 5: Replace the OPS dock board.

**Problem #4: No power (Power indicator is blank even no red colour)**

Step 1: Replace the Powerboard

Step 2: Replace the AC relay control board.

Step 3: Replace the Mainboard.

**Problem #5: Partial touch or dead touch area**

Step 1: Refer to Part B to test the FlatFrog touch panel signal.

Step 2: According to testing results, replace one pcba sensor or replace a whole set of pcba sensors.

**Problem #6: No touch**

Step 1: Check if only Windows has no touch or both Windows and Android have no touch.

Step 2: If only Windows has no touch, replace mainboard and OPS docking board one by one.

Step 3: If both Windows and Android have no touch, please refer to Part B to test the FlatFrog touch panel signal. According to testing results, replace the TP control board at first. If still not working, send back testing results for analysis.

**Problem #7: Ghost touch or the calibration is inaccurate**

Step 1: Refer to Part B to test the FlatFrog touch panel signal.

Step 2: According to testing results, replace one pcba sensor or replace a whole set of pcba sensors.

**Problem #8: No image (Black screen) even no faint display**

Step 1: Unplug the power cord for 30 seconds, then plug it back in and check again. If it the display starts with a normal image, please replace the Powerboard.

**Problem #9: Noise image or colour distortion**

Step 1: If only the OPS source has this issue, replace the OPS docking board or HDMI cable that goes between the OPS docking board and the Mainboard.

Step 2: If all sources, including Android, have this issue, replace the Mainboard, T-CON board, and LVDS cable one by one.

Step 3: Replace optical bonding module.

**Problem #10: Flicker screen**

Step 1: Replace Mainboard.

Step 2: Replace T-CON board and clean the FFC cable of T-CON.

Step 3: Replace optical bonding module.

**Problem #11: Stuck on splash logo, can't enter into homepage**

Step 1: Reload FW for mainboard.

Step 2: If it does not work, replace Mainboard.

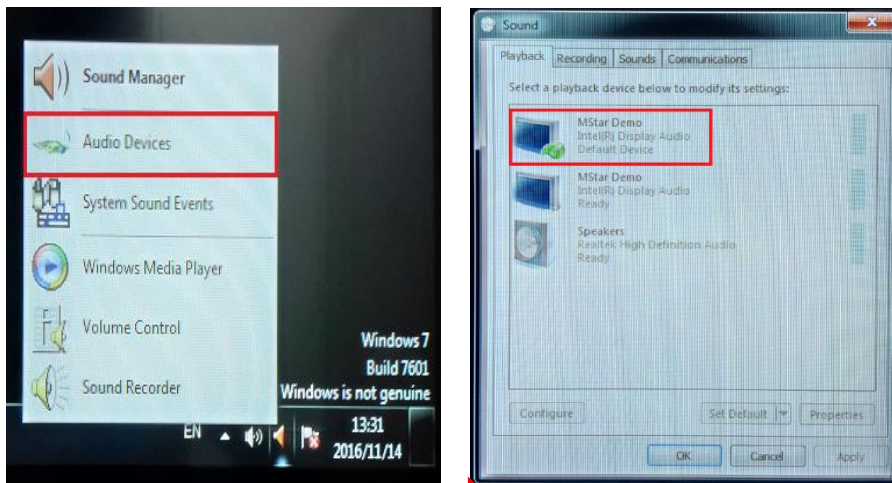
**Problem #12: Broken sound or sound popping**

Step 1: It should be a speaker issue, replace the speaker.

**Problem #13: No audio output from OPS**

Step 1: Install audio card drivers for the OPS.

Step 2: Right click the Speaker icon on the right side of the Windows toolbar. Select the "Audio device" item and set "MStar Demo" speaker as the default speaker device.



Step 3: Install all OPS drivers.

**Problem #16: No signal from all HDMI inputs**

Step 1: Replace Mainboard.

**Problem #17: Wifi module not working, can't detect wifi signal**

Step 1: Replace wifi module pcbas.

**Problem #18: Front HDMI not working**

Step 1: Replace Front port board.

Step 2: Replace HDMI cable between the Front port board and Mainboard.

# Thank you for reading!

For more info, please contact the manufacturer or authorized agent.